



Spirent Nomad Remote Control User Manual

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Notice:

This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment was tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and the receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

Changes or modifications to the Nomad hardware not expressly approved by Spirent Communications, Inc. may void the user's authority to operate the equipment.

Notice:

Spirent's Nomad ME hardware contains FCC certified transmitter modules FCC ID R47F2M03MLA.

Spirent's Nomad HD ME hardware is FCC certified under the FCC ID WR2-NOMADHD-01.

Notice:

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la Classe A est conforme à la norme NMB-003 du Canada.

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1 Introduction

Nomad Remote Control is an optional command set for controlling Nomad remotely via any Socket Client. Remote functionality includes:

- Time synchronization
- Specification of output file name and location
- Starting / stopping a recording session
- Displaying Call Performance call results on a remote client
- Displaying MOS results on a remote client

2 Accessing Nomad Remote Control

Nomad Remote Control may be accessed using the PuTTY utility for Windows 7. If you are using Windows Vista or another operating system, please contact Spirent Communications Product Support. Otherwise, follow the steps in this chapter to learn how to control Nomad remotely.

- [Configure Nomad for Remote Control](#)
- [Install and Configure the PuTTY Utility](#)
- [Sample Remote Control Command Session](#)

2.1 Configure Nomad for Remote Control

To configure Nomad for Remote Control perform the following steps.:

1. In the Nomad software, select the **Settings>General** tab.

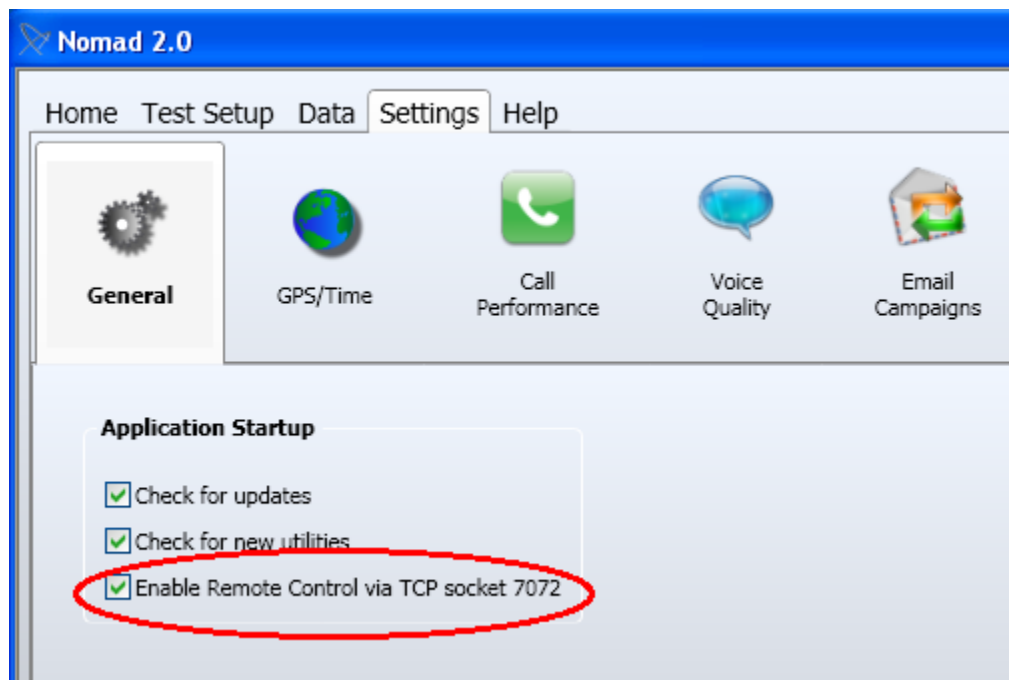


Figure 2-1- Enable Nomad Remote Control

2. Ensure that the **Enable Remote Control via TCP Socket 7072** option is selected.
3. Windows or your security software may attempt to block this request. “Unblock” or allow access to the program.

2.2 Install and Configure the PuTTY Utility

Nomad must be running on the remote computer before attempting to connect using PuTTY.

To install PuTTY perform the following steps.

1. Browse to: <http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html>
2. On the **PuTTY Download** webpage scroll down to the **putty.exe** download link.

For Windows on Intel x86

PuTTY:	putty.exe	(or by FTP)	(RSA sig)	(DSA sig)
PuTTYtel:	puttytel.exe	(or by FTP)	(RSA sig)	(DSA sig)
PSCP:	pscp.exe	(or by FTP)	(RSA sig)	(DSA sig)
PSFTP:	psftp.exe	(or by FTP)	(RSA sig)	(DSA sig)
Plink:	plink.exe	(or by FTP)	(RSA sig)	(DSA sig)
Pageant:	pageant.exe	(or by FTP)	(RSA sig)	(DSA sig)
PuTTYgen:	puttygen.exe	(or by FTP)	(RSA sig)	(DSA sig)

Figure 2-2 - putty.exe Download Link

3. Click on **putty.exe** and save it locally. Saving the **putty.exe** utility will allow you to run it without returning to the web page.
4. Once saved you can **run** PuTTY when you are going to use Nomad Remote Control.

To configure PuTTY perform the following steps:

1. With Nomad running, open PuTTY.

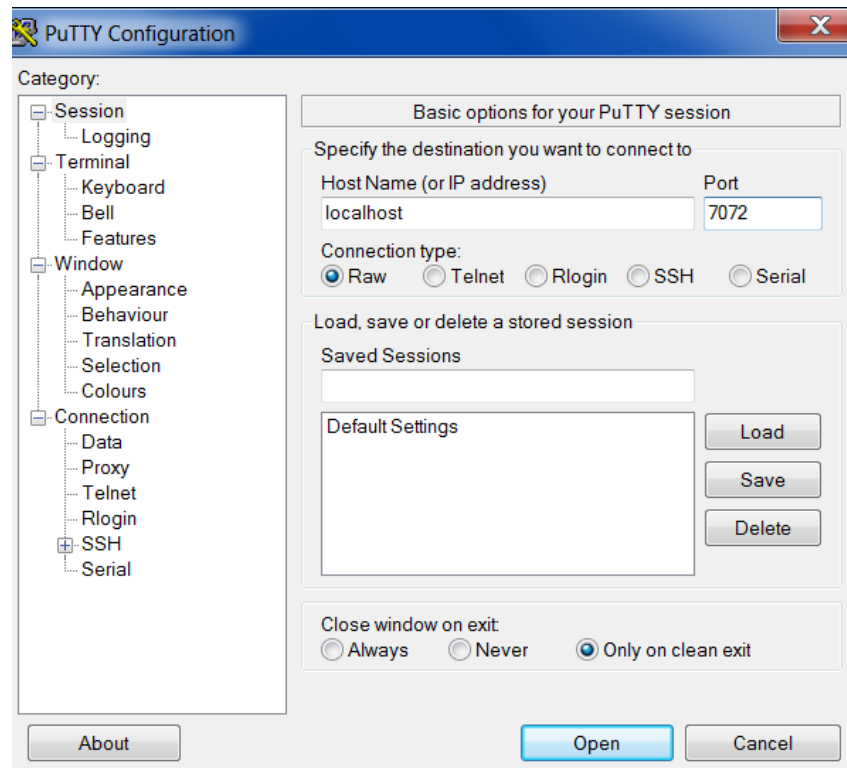


Figure 2-3 - PuTTY Configuration Screen

2. Enter the following configuration settings:
 - **Host Name** – Enter the IP address of the host computer (or localhost for a locally installed Nomad)
 - **Port** – 7072
 - **Connection Type** – Raw
3. If desired, **Save** the session settings.
4. Click **Open** to display the command prompt.

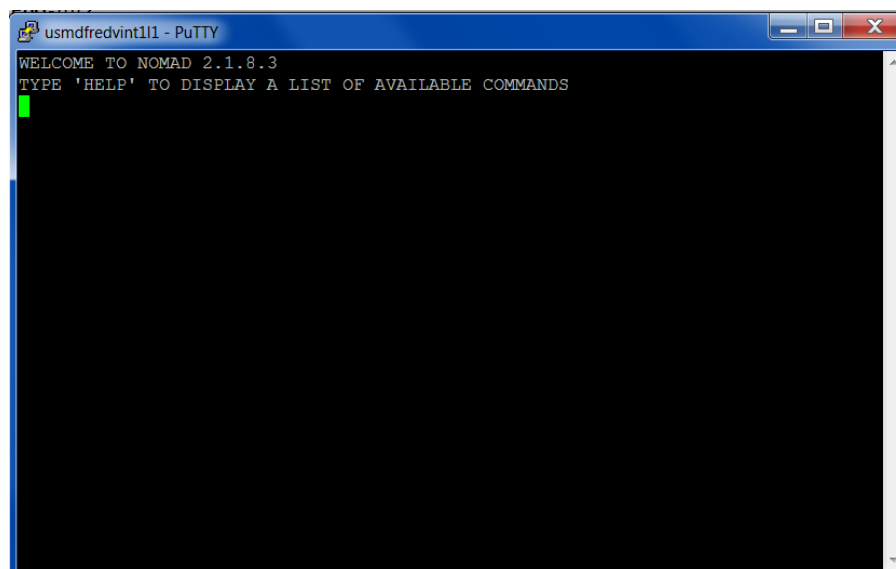


Figure 2-4 - PuTTY Connection Status

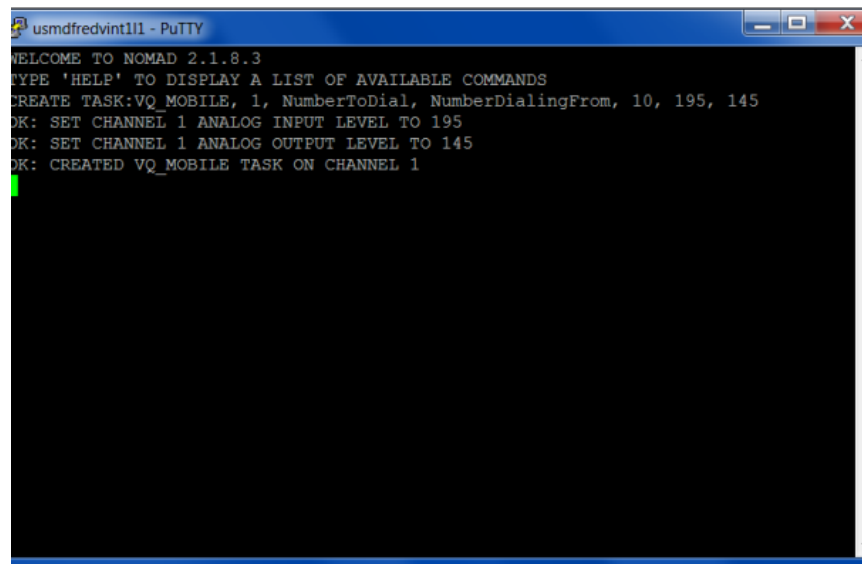
2.3 Sample Voice Quality Remote Control Command Session

The sample command sequence presented here creates and executes a voice quality test for a mobile connected via analog audio cable to Channel 1. Before commencing with these steps, connect a test handset to Channel 1 via audio cable and dial the test phone number.

1. At the HyperTerminal prompt, create a new task using this command:
CREATE TASK: VQ_MOBILE, 1, NumberToDial, NumberDialingFrom, 10, 195, 145
2. Hit **Enter** after entering the command. The command and the reply will be visible on the screen.

Note: This command creates a new Voice Quality task with the following properties:

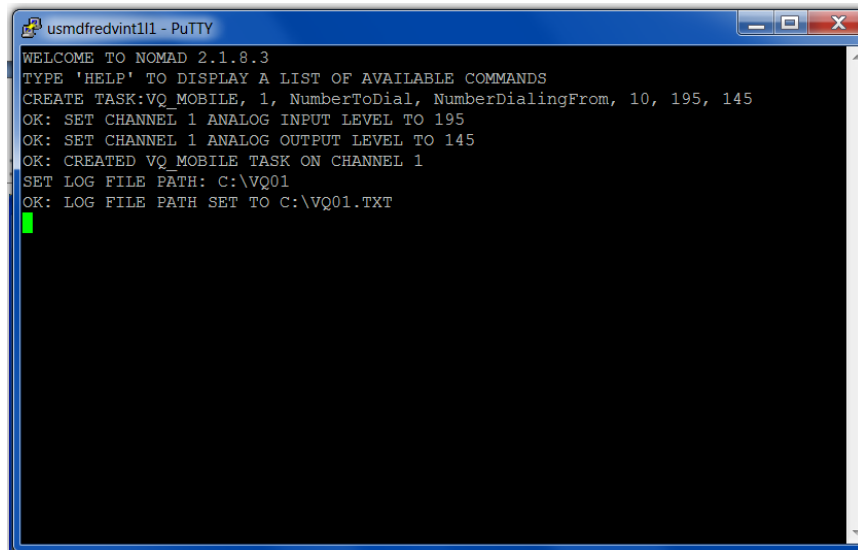
- Channel Index = 1
- Number To Dial = NumberToDial
- Number Dialing From = NumberDialingFrom
- Number Of Test Cycles = 10 (enter 0 here to perform infinite cycles)
- Input Level = 195
- Output Level = 145



```
usmfredvint111 - PuTTY
WELCOME TO NOMAD 2.1.8.3
TYPE 'HELP' TO DISPLAY A LIST OF AVAILABLE COMMANDS
CREATE TASK:VQ_MOBILE, 1, NumberToDial, NumberDialingFrom, 10, 195, 145
OK: SET CHANNEL 1 ANALOG INPUT LEVEL TO 195
OK: SET CHANNEL 1 ANALOG OUTPUT LEVEL TO 145
OK: CREATED VQ_MOBILE TASK ON CHANNEL 1
```

Figure 2-5 - CREATE TASK Command and Reply

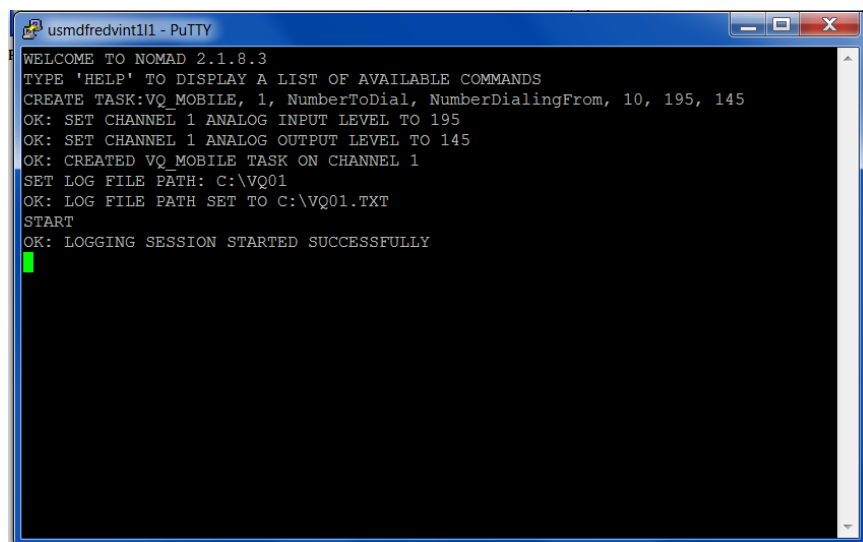
3. Type the command to create the session output file and hit **Enter**: SET LOG FILE PATH: C:\VQ01



```
usmdfredvint111 - PuTTY
WELCOME TO NOMAD 2.1.8.3
TYPE 'HELP' TO DISPLAY A LIST OF AVAILABLE COMMANDS
CREATE TASK:VQ_MOBILE, 1, NumberToDial, NumberDialingFrom, 10, 195, 145
OK: SET CHANNEL 1 ANALOG INPUT LEVEL TO 195
OK: SET CHANNEL 1 ANALOG OUTPUT LEVEL TO 145
OK: CREATED VQ_MOBILE TASK ON CHANNEL 1
SET LOG FILE PATH: C:\VQ01
OK: LOG FILE PATH SET TO C:\VQ01.TXT
█
```

Figure 2-6 - SET LOG FILE PATH Command and Reply

4. Type the command to start logging and hit **Enter**: START

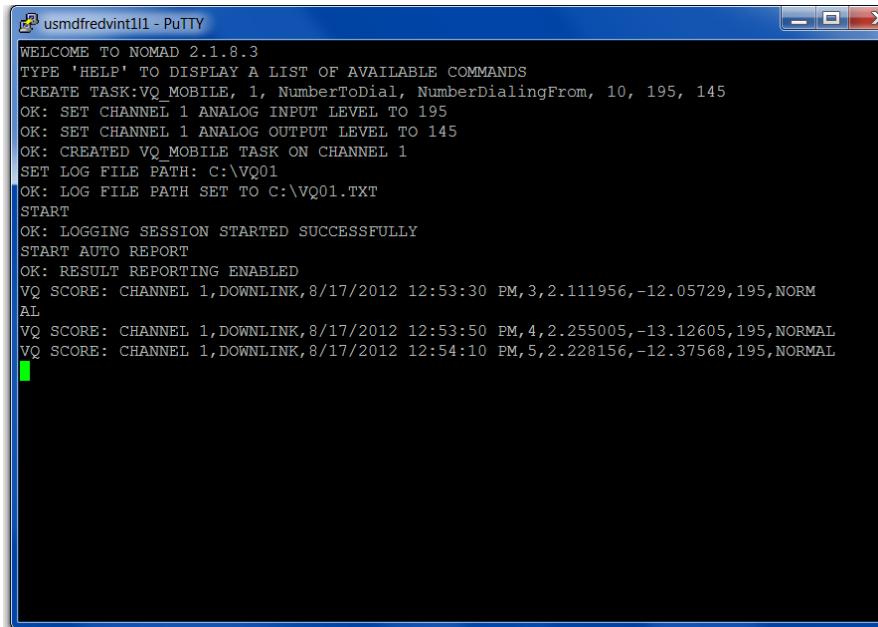


```
usmdfredvint111 - PuTTY
WELCOME TO NOMAD 2.1.8.3
TYPE 'HELP' TO DISPLAY A LIST OF AVAILABLE COMMANDS
CREATE TASK:VQ_MOBILE, 1, NumberToDial, NumberDialingFrom, 10, 195, 145
OK: SET CHANNEL 1 ANALOG INPUT LEVEL TO 195
OK: SET CHANNEL 1 ANALOG OUTPUT LEVEL TO 145
OK: CREATED VQ_MOBILE TASK ON CHANNEL 1
SET LOG FILE PATH: C:\VQ01
OK: LOG FILE PATH SET TO C:\VQ01.TXT
START
OK: LOGGING SESSION STARTED SUCCESSFULLY
█
```

Figure 2-7 - START Command and Reply

5. Type the command to display results locally and hit **Enter**: START AUTO REPORT
6. After several recording cycles multiple MOS reports will be visible in the PuTTY area.

7. Events are displayed during logging in the following format: *VQ SCORE: CHANNEL X, TransferDirection, TimeStampUTC, CycleNumber, Score, InsGain, AudioLevel, Classification*



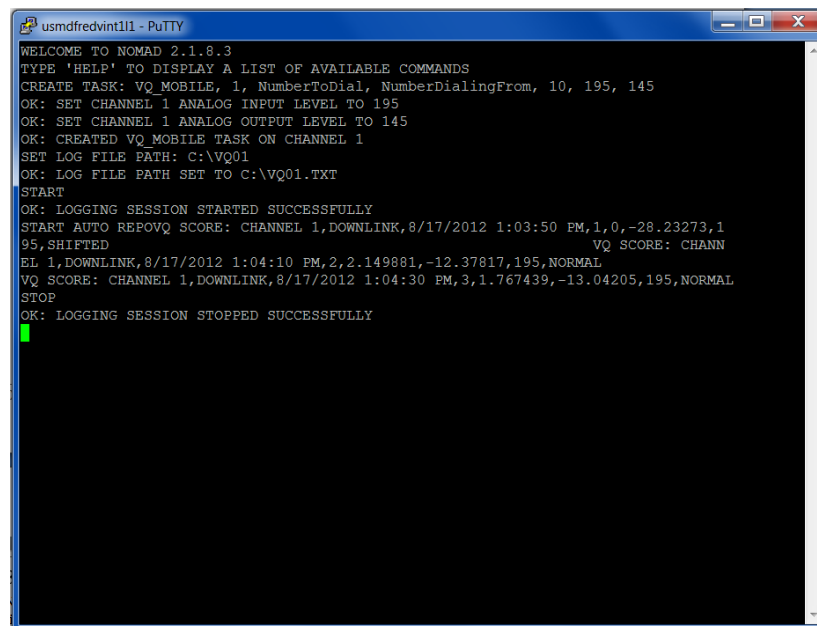
```

usmfredvint111 - PuTTY
WELCOME TO NOMAD 2.1.8.3
TYPE 'HELP' TO DISPLAY A LIST OF AVAILABLE COMMANDS
CREATE TASK:VQ_MOBILE, 1, NumberToDial, NumberDialingFrom, 10, 195, 145
OK: SET CHANNEL 1 ANALOG INPUT LEVEL TO 195
OK: SET CHANNEL 1 ANALOG OUTPUT LEVEL TO 145
OK: CREATED VQ_MOBILE TASK ON CHANNEL 1
SET LOG FILE PATH: C:\VQ01
OK: LOG FILE PATH SET TO C:\VQ01.TXT
START
OK: LOGGING SESSION STARTED SUCCESSFULLY
START AUTO REPORT
OK: RESULT REPORTING ENABLED
VQ SCORE: CHANNEL 1,DOWNLINK,8/17/2012 12:53:30 PM,3,2.111956,-12.05729,195,NORM
AL
VQ SCORE: CHANNEL 1,DOWNLINK,8/17/2012 12:53:50 PM,4,2.255005,-13.12605,195,NORMAL
VQ SCORE: CHANNEL 1,DOWNLINK,8/17/2012 12:54:10 PM,5,2.228156,-12.37568,195,NORMAL

```

Figure 2-8 - START AUTO REPORT Command and Reply

8. Finally, type the command to stop logging followed by the **Enter** key: STOP



```

usmfredvint111 - PuTTY
WELCOME TO NOMAD 2.1.8.3
TYPE 'HELP' TO DISPLAY A LIST OF AVAILABLE COMMANDS
CREATE TASK: VQ_MOBILE, 1, NumberToDial, NumberDialingFrom, 10, 195, 145
OK: SET CHANNEL 1 ANALOG INPUT LEVEL TO 195
OK: SET CHANNEL 1 ANALOG OUTPUT LEVEL TO 145
OK: CREATED VQ_MOBILE TASK ON CHANNEL 1
SET LOG FILE PATH: C:\VQ01
OK: LOG FILE PATH SET TO C:\VQ01.TXT
START
OK: LOGGING SESSION STARTED SUCCESSFULLY
START AUTO REPOVQ SCORE: CHANNEL 1,DOWNLINK,8/17/2012 1:03:50 PM,1,0,-28.23273,1
95,SHIFTED
VQ SCORE: CHANN
EL 1,DOWNLINK,8/17/2012 1:04:10 PM,2,2.149881,-12.37817,195,NORMAL
VQ SCORE: CHANNEL 1,DOWNLINK,8/17/2012 1:04:30 PM,3,1.767439,-13.04205,195,NORMAL
STOP
OK: LOGGING SESSION STOPPED SUCCESSFULLY

```

Figure 2-9 - STOP Reply and Command

2.4 Sample Call Performance Remote Control Command Session

The sample command sequence presented here creates and executes a Mobile Originated Call Performance task on Channel 1.

At the PuTTY prompt, create a new task using this command:

CREATE TASK: CP_MO, 1, *NumberToDial*, *NumberDialingFrom*, 45, 60, 15, 20, Fixed

Hit **Enter** after entering the command. The command and the reply will be visible on the screen.

Note: This command creates a new Call Performance Mobile Originated task with the following properties

Channel Index = 1

Number To Dial = *NumberToDial*

Number Dialing From = *NumberDialingFrom*

Access Timeout = 45 seconds

Duration = 60 seconds

Wait Time = 15 seconds

Number of Test Cycles = 20

Init Mode = Fixed

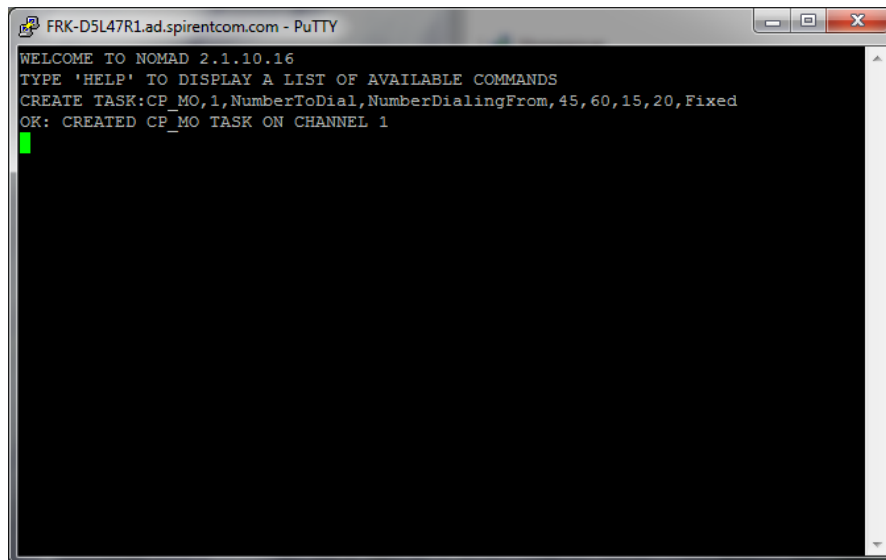
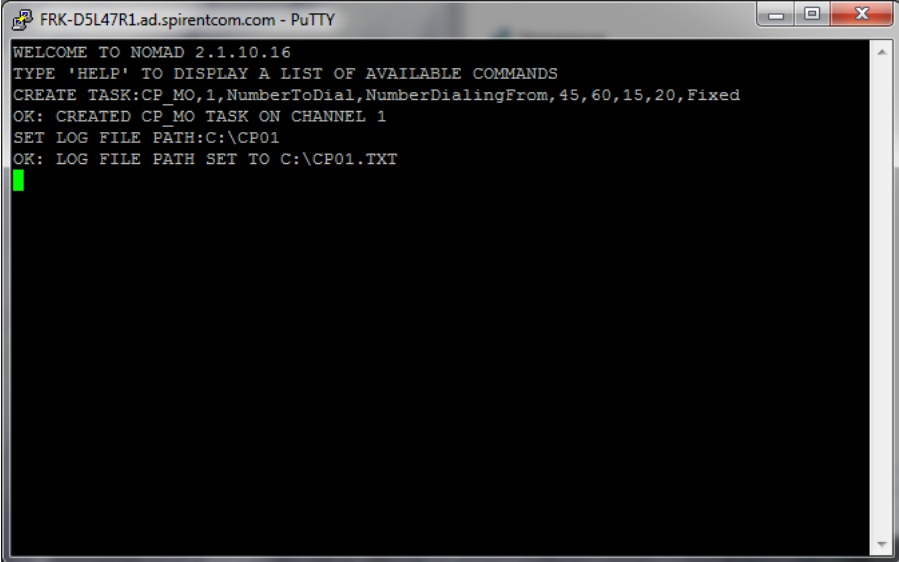


Figure 2-10 - CREATE TASK Command and Reply

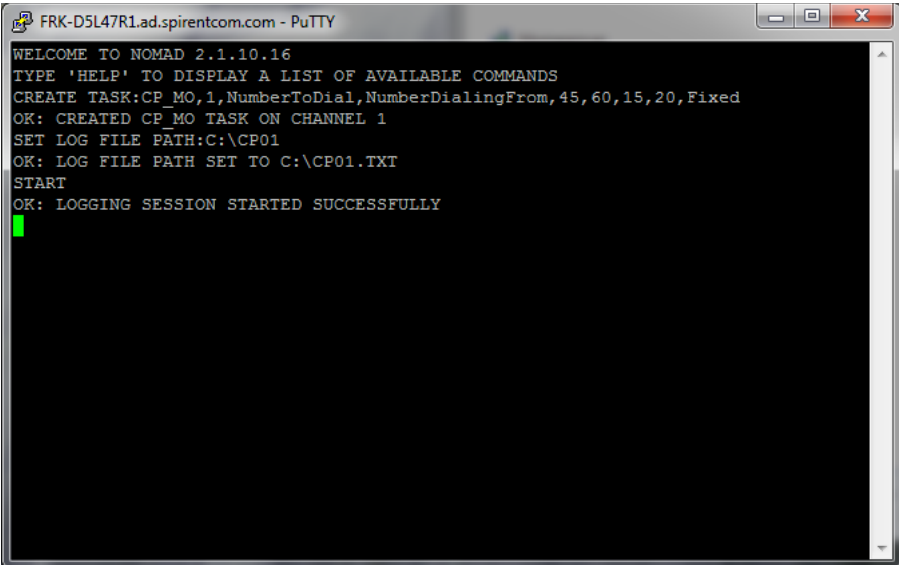
Type the command to create the session output file and hit **Enter**: SET LOG FILE PATH:C:\CP01



```
FRK-D5L47R1.ad.spirentcom.com - PuTTY
WELCOME TO NOMAD 2.1.10.16
TYPE 'HELP' TO DISPLAY A LIST OF AVAILABLE COMMANDS
CREATE TASK:CP_MO,1,NumberToDial,NumberDialingFrom,45,60,15,20,Fixed
OK: CREATED CP_MO TASK ON CHANNEL 1
SET LOG FILE PATH:C:\CP01
OK: LOG FILE PATH SET TO C:\CP01.TXT
█
```

Figure 2-11 - SET LOG FILE PATH Command and Reply

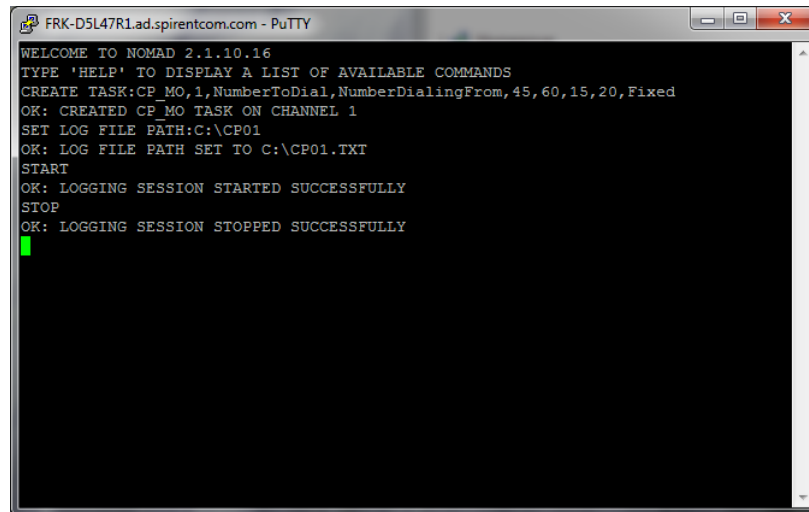
Type the command to start logging and hit **Enter**: START



```
FRK-D5L47R1.ad.spirentcom.com - PuTTY
WELCOME TO NOMAD 2.1.10.16
TYPE 'HELP' TO DISPLAY A LIST OF AVAILABLE COMMANDS
CREATE TASK:CP_MO,1,NumberToDial,NumberDialingFrom,45,60,15,20,Fixed
OK: CREATED CP_MO TASK ON CHANNEL 1
SET LOG FILE PATH:C:\CP01
OK: LOG FILE PATH SET TO C:\CP01.TXT
START
OK: LOGGING SESSION STARTED SUCCESSFULLY
█
```

Figure 2-12 - START Command and Reply

The logging session can be allowed to run for the specified number of cycles or manually stopped by typing the command to stop logging and hit **Enter**: STOP



```
FRK-D5L47R1ad.spirentcom.com - PuTTY
WELCOME TO NOMAD 2.1.10.16
TYPE 'HELP' TO DISPLAY A LIST OF AVAILABLE COMMANDS
CREATE TASK:CP_MO,1,NumberToDial,NumberDialingFrom,45,60,15,20,Fixed
OK: CREATED CP MO TASK ON CHANNEL 1
SET LOG FILE PATH:C:\CP01
OK: LOG FILE PATH SET TO C:\CP01.TXT
START
OK: LOGGING SESSION STARTED SUCCESSFULLY
STOP
OK: LOGGING SESSION STOPPED SUCCESSFULLY
█
```

Figure 2-13 - START Command and Reply

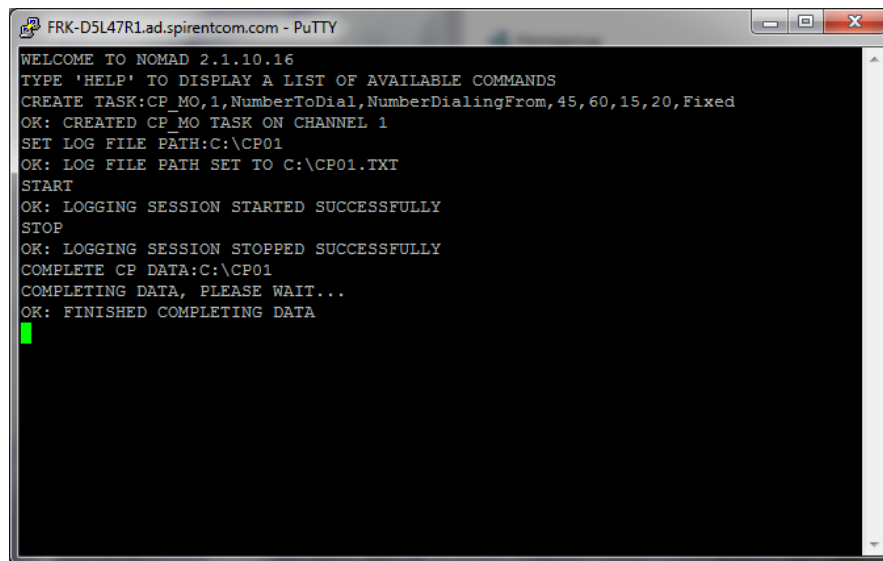
Note: If the logging session is allowed to run to completion without using the STOP command then the following message will be returned when the session is done
LOGGING SESSION COMPLETED

Type the command to complete the Call Performance data and hit **Enter**:
COMPLETE CP DATA:C:\CP01

Note: As soon as a session is stopped the data is automatically starting to complete by Nomad. This command allows the user to know when it is done. One of the following will happen when this is called:

The file has already completed and the completion message is returned
FILE DATA ALREADY COMPLETE

The file has not yet completed and a status message will be displayed every 10 seconds until a final confirmation message
COMPLETING DATA, PLEASE WAIT...
FINISHED COMPLETING DATA



```

FRK-D5L47R1.ad.spirentcom.com - PuTTY
WELCOME TO NOMAD 2.1.10.16
TYPE 'HELP' TO DISPLAY A LIST OF AVAILABLE COMMANDS
CREATE TASK:CP_MO,1,NumberToDial,NumberDialingFrom,45,60,15,20,Fixed
OK: CREATED CP_MO TASK ON CHANNEL 1
SET LOG FILE PATH:C:\CP01
OK: LOG FILE PATH SET TO C:\CP01.TXT
START
OK: LOGGING SESSION STARTED SUCCESSFULLY
STOP
OK: LOGGING SESSION STOPPED SUCCESSFULLY
COMPLETE CP DATA:C:\CP01
COMPLETING DATA, PLEASE WAIT...
OK: FINISHED COMPLETING DATA

```

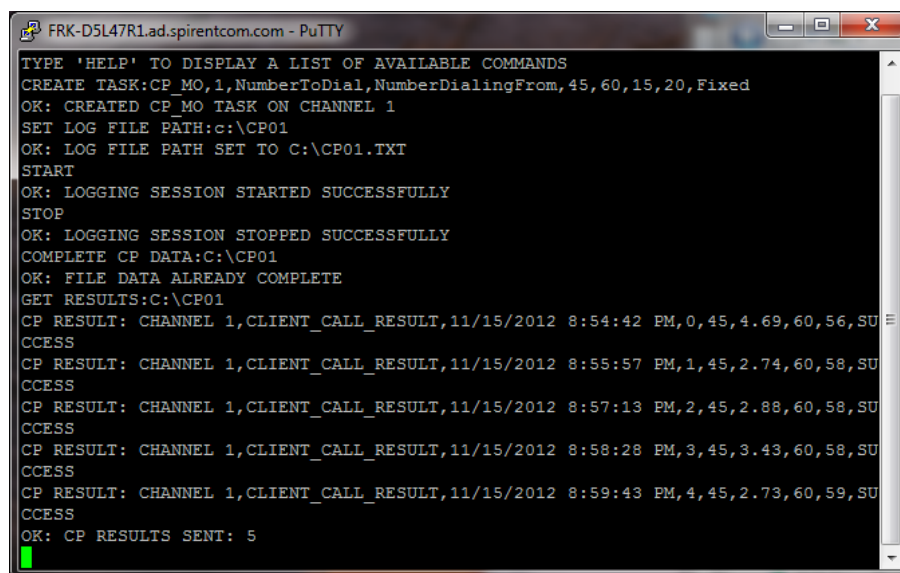
Figure 2-14 - COMPLETE CP DATA Command and Reply

Type the command to retrieve the Call Results for the session and hit **Enter**:
GET RESULTS:C:\CP01

Results are displayed in the following format:

CP RESULT: CHANNEL X, MessageType, TimestampUTC, CallID, AccessTimeout, AccessTime, ExpectedDuration, ActualDuration, ResultType

Once all results have been sent the following message will be displayed indicating the total number of results sent: CP RESULTS SENT: numberOfResultsSent



```

FRK-D5L47R1.ad.spirentcom.com - PuTTY
TYPE 'HELP' TO DISPLAY A LIST OF AVAILABLE COMMANDS
CREATE TASK:CP_MO,1,NumberToDial,NumberDialingFrom,45,60,15,20,Fixed
OK: CREATED CP_MO TASK ON CHANNEL 1
SET LOG FILE PATH:c:\CP01
OK: LOG FILE PATH SET TO C:\CP01.TXT
START
OK: LOGGING SESSION STARTED SUCCESSFULLY
STOP
OK: LOGGING SESSION STOPPED SUCCESSFULLY
COMPLETE CP DATA:C:\CP01
OK: FILE DATA ALREADY COMPLETE
GET RESULTS:C:\CP01
CP RESULT: CHANNEL 1,CLIENT_CALL_RESULT,11/15/2012 8:54:42 PM,0,45,4.69,60,56,SU E
CESS
CP RESULT: CHANNEL 1,CLIENT_CALL_RESULT,11/15/2012 8:55:57 PM,1,45,2.74,60,58,SU
CESS
CP RESULT: CHANNEL 1,CLIENT_CALL_RESULT,11/15/2012 8:57:13 PM,2,45,2.88,60,58,SU
CESS
CP RESULT: CHANNEL 1,CLIENT_CALL_RESULT,11/15/2012 8:58:28 PM,3,45,3.43,60,58,SU
CESS
CP RESULT: CHANNEL 1,CLIENT_CALL_RESULT,11/15/2012 8:59:43 PM,4,45,2.73,60,59,SU
CESS
OK: CP RESULTS SENT: 5

```

Figure 2-15 - GET RESULTS Command and Reply

Additional commands are available for remotely implementing many common Nomad functions. See the following section for the full Remote Control command set.

2.5 APP Daemon

As a separate option, you can obtain from Spirent, an APP Domain application, which you can use to enable remote starting of your Nomad device.

After downloading the APP Daemon application, extract the zip file and click APPDAemon.exe and a screen like the following appears.

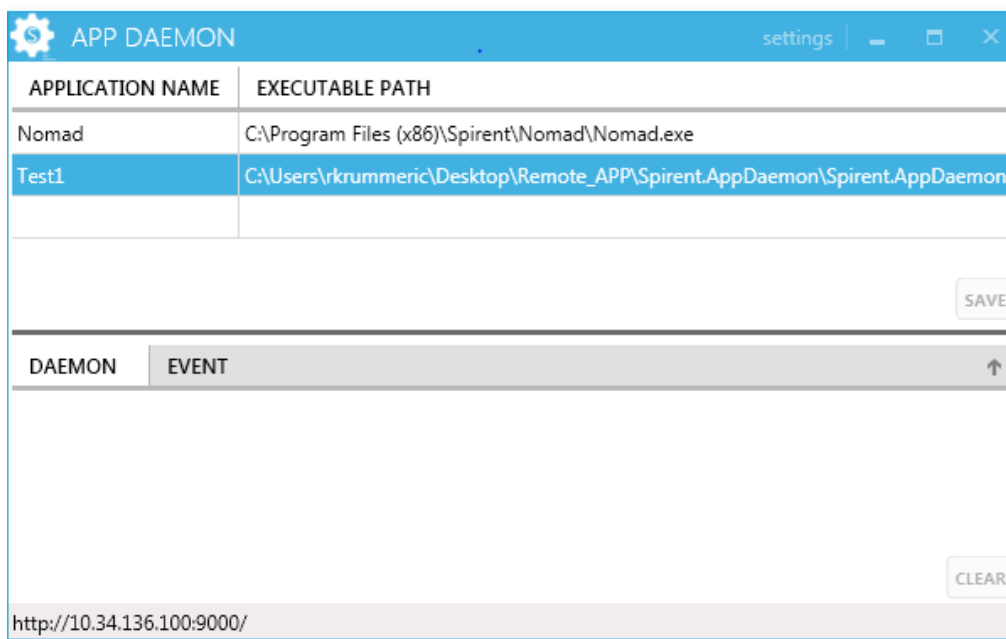


Figure 2-16 - GET RESULTS Command and Reply

Prior to starting, click Settings and a screen like the following appears.

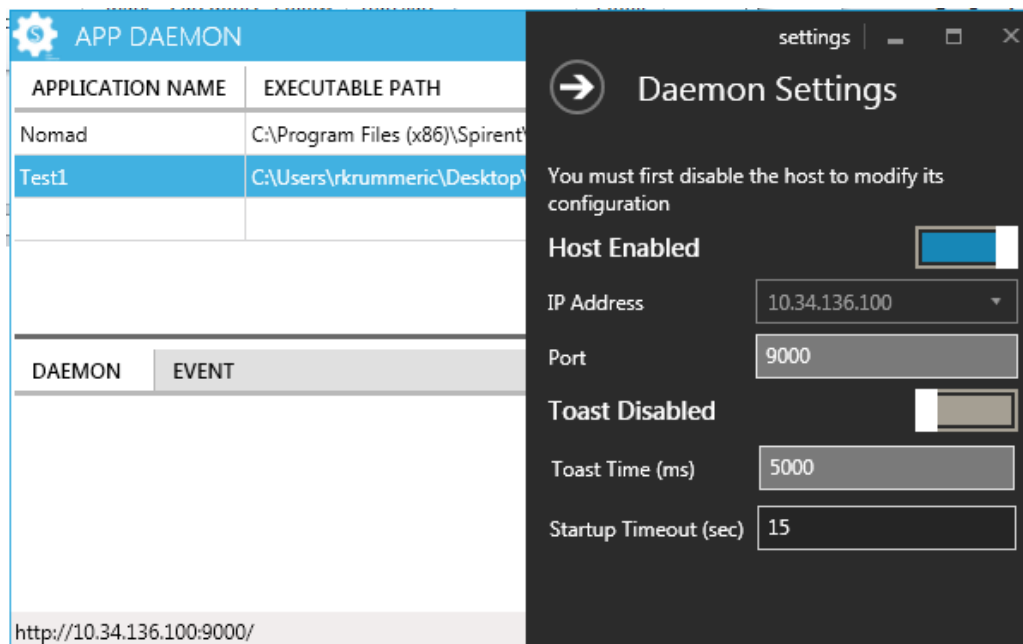


Figure 2-17 –Daemon Settings

To configure the settings perform the following steps.

1. Disable the host.
2. Enter the IP Address
3. Enter the Port
4. Disable Toast
5. Enter a Toast Time
6. Enter a Startup Time.
7. Click the arrow when you are finished to return to the main screen.

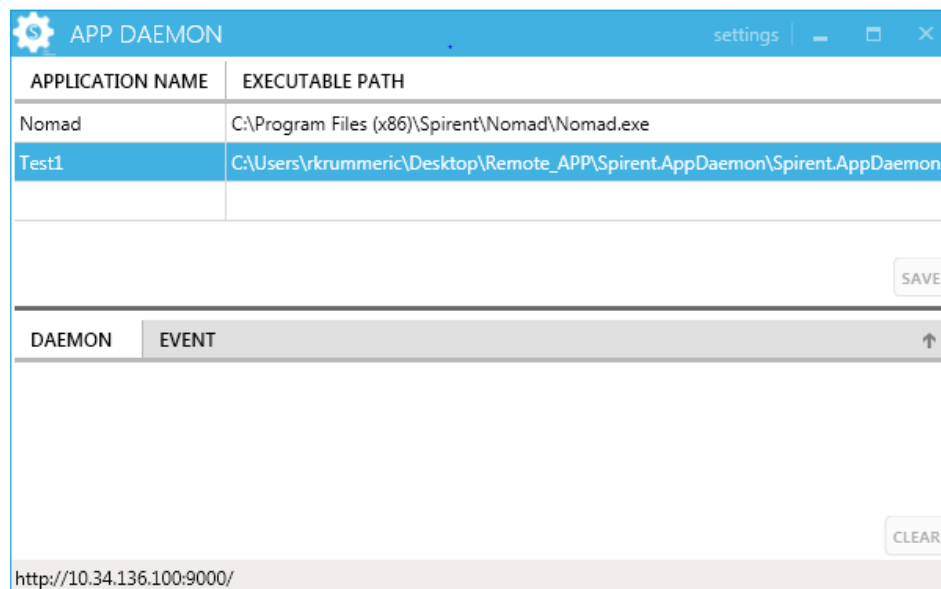


Figure 2-18 – Main Screen

8. From this screen, enter your application name such as Nomad or Chromatic.
9. Enter the path of the .exe file.
10. Double click on the path and you can now remotely start the application.

3 Nomad Remote Control Command Set

Nomad installs a server host that will automatically run when the program is executed, providing limited remote control ability. Socket level communication is available on port 7072 from any “Socket Client” such as the PuTTY utility.

The remote commands available for Nomad are:

- [NEW SESSION PROFILE](#)
- [SET LOG FILE PATH: *LogFilePath*](#)
- [LOAD SESSION PROFILE: *ProfileName*](#)
- [START](#)
- [STOP](#)
- [START AUTO REPORT](#)
- [STOP AUTO REPORT](#)
- [VERSION](#)
- [TIME SYNC INTERNET](#)
- [TIME SYNC GPS](#)
- [SET INPUT LEVEL: *ChannelIndex, InputLevel*](#)
- [SET BT INPUT LEVEL: *ChannelIndex, InputLevel*](#)
- [SET OUTPUT LEVEL: *ChannelIndex, OutputLevel*](#)
- [SET BT OUTPUT LEVEL: *ChannelIndex, OutputLevel*](#)
- [CREATE TASK: *TaskString*](#)
- [COMPLETE CP DATA: *LogFilePath*](#)
- [GET RESULTS: *LogFilePath*](#)
- [SET SCORING MODEL: *ChannelIndex, ScoringModel*](#)
- [GENERATE EXCEL](#)
- [SET PROMPT: *PromptString*](#)
- [START PAIRING: *ChannelIndex*](#)
- [STOP PAIRING: *ChannelIndex*](#)
- [QUIT](#)

The commands are described in detail below.

Notes:

- Commands may be entered in either upper or lower case.
- Commands should be terminated by with a CRLF (Carriage-Return / Line-Feed).
- Commands that execute successfully will be prefixed with the response “**OK:** ”.
- Commands that fail to execute will be prefixed with the response “**ERROR:** ”.
- Commands that are unrecognized will result in the response “**UNKNOWN COMMAND:** ”.
- If Nomad stops responding, restart Nomad and the socket connection and try again.

3.1 NEW SESSION PROFILE

Command Format	NEW SESSION PROFILE
Purpose	Removes the tasks from all channels to build a new Session Profile from scratch
Parameter(s)	None
Example	NEW SESSION PROFILE
Possible Error Responses	Test is running

3.2 SET LOG FILE PATH

Command Format	SET LOG FILE PATH: <i>LogFilePath</i>
Purpose	Sets the file name for the current logging session log file to the path specified by <i>LogFilePath</i>.
Parameter(s)	<i>LogFilePath</i>
Example	This command sets the log file path as "C:\VQ01.txt": SET LOG FILE PATH: C:\VQ01
Possible Error Responses	- Test is running - Log file path cannot be empty - Directory does not exist

3.3 LOAD SESSION PROFILE

Command Format	LOAD SESSION PROFILE: <i>ProfileName</i>
Purpose	Loads the session profile with the name of <i>ProfileName</i>
Parameter(s)	<i>ProfileName</i>
Example	This command loads a profile called "VoiceQualityTestProfile": LOAD SESSION PROFILE: VoiceQualityTestProfile

Possible Error Responses	- Test is running - Session profile name cannot be empty - Cannot find session profile named [suppliedName]
---------------------------------	---

3.4 START

Command Format	START
Purpose	Starts a logging session
Parameter(s)	None
Example	START
Nomad Response	If the logging session is allowed to run to completion, without being stopped remotely using the stop command, or through the UI, then the following message will be returned when the session is done: LOGGING SESSION COMPLETED
Possible Error Responses	- Log file path is not set - Test is running - The following Bluetooth channels must be in a 'CONNECTED' state before starting: [channels] - No Internet Connection - System Clock not sync'd with Call Server clock - Problem starting MT Campaign

3.5 STOP

Command Format	STOP
Purpose	Stops a logging session
Parameter(s)	None
Example	STOP
Possible Error Responses	No active logging session

3.6 START AUTO REPORT

Command Format	START AUTO REPORT
Purpose	Enables local reporting of voice quality results while a test is running
Parameter(s)	None
Example	START AUTO REPORT
Nomad Response	Events are displayed during logging in the following format: VQ SCORE: CHANNEL X, TransferDirection, TimeStampUTC, CycleNumber, Score, InsGain, AudioLevel, Classification

3.7 STOP AUTO REPORT

Command Format	STOP AUTO REPORT
Purpose	Disables local reporting of voice quality results while a test is running
Parameter(s)	None
Example	STOP AUTO REPORT

3.8 VERSION

Command Format	VERSION
Purpose	Returns the current running version of Nomad
Parameter(s)	None
Example	VERSION

3.9 TIME SYNC INTERNET

Command Format	TIME SYNC INTERNET
Purpose	Attempts to synchronize the test PC clock to the Audio Server using internet time synchronization

Parameter(s)	• None
Example	• TIME SYNC INTERNET
Possible Error Responses	• Could not start internet time sync

3.10 TIME SYNC GPS

Command Format	• TIME SYNC GPS
Purpose	• Attempts to synchronize the test PC clock to the Audio Server using GPS time synchronization
Parameter(s)	• None
Example	• TIME SYNC GPS
Possible Error Responses	• Could not start gps time sync

3.11 SET INPUT LEVEL

Command Format	• SET INPUT LEVEL: <i>ChannelIndex</i>, <i>InputLevel</i>
Purpose	• Sets the analog input level (downlink volume) of the selected channel
Parameter(s)	• <i>ChannelIndex</i> • <i>InputLevel</i>
Example	This command sets the Channel 1 input level to 200: • SET INPUT LEVEL: 1, 200
Possible Error Responses	• Invalid channel • Input level must be greater than or equal to x • Input level must be less than or equal to x

3.12 SET BT INPUT LEVEL

Command Format	• SET BT INPUT LEVEL: <i>ChannelIndex</i>, <i>InputLevel</i>
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Purpose	• Sets the Bluetooth input level (downlink volume) of the selected channel
Parameter(s)	• <i>ChannelIndex</i> • <i>InputLevel</i>
Example	This command sets the Channel 3 Bluetooth input level to 2: • SET BT INPUT LEVEL: 3, 2
Possible Error Responses	• Invalid channel • Input level must be greater than or equal to x • Input level must be less than or equal to x

3.13 SET OUTPUT LEVEL

Command Format	• SET OUTPUT LEVEL: <i>ChannelIndex</i>, <i>OutputLevel</i>
Purpose	• Sets the analog output level (uplink volume) of the selected channel
Parameter(s)	• <i>ChannelIndex</i> • <i>OutputLevel</i>
Example	This command sets the Channel 1 output level to 145: • SET OUTPUT LEVEL: 1,145
Possible Error Responses	• Invalid channel • Output level must be greater than or equal to x • Output level must be less than or equal to x

3.14 SET BT OUTPUT LEVEL

Command Format	• SET BT OUTPUT LEVEL: <i>ChannelIndex</i>, <i>OutputLevel</i>
Purpose	• Sets the Bluetooth output level (uplink volume) of the selected channel
Parameter(s)	• <i>ChannelIndex</i> • <i>OutputLevel</i>
Example	This command sets the Channel 3 output level to 10: • SET BT OUTPUT LEVEL: 3, 10

**Possible Error
Responses**

- Invalid channel
- Output level must be greater than or equal to x
- Output level must be less than or equal to x

3.15 CREATE TASK

Command Format	• CREATE TASK: <i>TaskString</i>
Purpose	• Creates a task using a specific task string to enter the descriptive parameters
Voice Quality Task Strings	• VQ_MOBILE, ChannelIndex, NumberToDial, NumberDialingFrom, CycleCount, InputLevel, OutputLevel, AudioInterface, SampleRate, <optional:HfpVersion> • VQ_BASE, ChannelIndex, NumberToDial, NumberDialingFrom, CycleCount, InputLevel, OutputLevel, AudioInterface, SampleRate, <optional:HfpVersion> • VQ_RECORD_ONLY, ChannelIndex, NumberToDial, NumberDialingFrom, CycleCount, InputLevel, OutputLevel, AudioInterface, SampleRate, <optional:HfpVersion> • VQ_SOURCE_ONLY, ChannelIndex, NumberToDial, NumberDialingFrom, CycleCount, InputLevel, OutputLevel, AudioInterface, SampleRate, <optional:HfpVersion> Note: CycleCount may be set to 0 for infinite cycles
Call Performance Task Strings	• CP_MO, ChannelIndex, NumberToDial, NumberDialingFrom, AccessTimeoutSeconds, DurationSeconds, WaitTimeSeconds, Attempts , InitMode, HFPVersion • CP_MT, ChannelIndex, NumberToDial, NumberDialingFrom, AccessTimeoutSeconds, DurationSeconds, WaitTimeSeconds, Attempts, InitMode, HFPVersion • CP_M2MO, ChannelIndex, NumberToDial, NumberDialingFrom, AccessTimeoutSeconds, DurationSeconds, WaitTimeSeconds, Attempts , InitMode, HFPVersion, ExternalDevice, ExternalDeviceChannelIndex • CP_M2MT, ChannelIndex, NumberToDial, NumberDialingFrom, AccessTimeoutSeconds, DurationSeconds, WaitTimeSeconds, Attempts, InitMode, HFPVersion, ExternalDevice, ExternalDeviceChannelIndex InitMode options: • Fixed – Creates a synchronous call campaign • Variable – Creates an asynchronous call campaign HFPVersion options: • V1_5 – HFP Version1.5 • V1_6 – HFP Version1.6 ExternalDevice Options: • LocalReceiver: For use on M2MO tasks when the receiver is on a local channel • LocalCaller: For use on M2MT tasks when the caller is on a local channel • RemoteReceiver: For use on M2MO tasks when the receiver is on a remote unit • RemoteCaller: For use on M2MT tasks when the caller is on a remote unit

Example	This command creates a new Voice Quality task with the following parameters: • Channel Index = 1 • Number To Dial = 617-277-2111 • Number Dialing From = 443-888-6259 • Number of Test Cycles = 10 • Input Level = 195 • Output Level = 145 • CREATE TASK: VQ_MOBILE, 1, 6172772111, 4438886259, 10, 195, 145
Possible Error Responses	• Tests is running • Task configuration string cannot be empty • Task configuration string not formatted properly • Task configuration string does not contain enough arguments • Invalid task type • Invalid channel • VQ_MOBILE task not licensed • VQ_BASE task not licensed • VQ_RECORD_ONLY task not licensed • VQ_SOURCE_ONLY task not licensed • CP_MO task not licensed • CP_MT task not licensed • Failed to create task

3.16 COMPLETE CP DATA

Command Format	• COMPLETE CP DATA: <i>LogFilePath</i>
Purpose	• Completes all CP data associated with the given log file
Parameter(s)	• LogFilePath
Example	This command sets the log file path as "C:\CP01.txt" • COMPLETE CP DATA: C:\CP01
Nomad Response	• The following result will be displayed if the data associated with the given log file is already complete: FILE DATA ALREADY COMPLETE If the data associated with the given log file is not yet complete, then a status message will be displayed indicating ongoing completion action every 10 seconds until a final confirmation message is returned. An example follows: COMPLETING DATA, PLEASE WAIT... COMPLETING DATA, PLEASE WAIT... FINISHED COMPLETING DATA
Possible Error Responses	• File does not exist • Not a valid log file

3.17 GET RESULTS

Command Format	• GET RESULTS: <i>LogFilePath</i>
Purpose	• Gets the results from the CP tests associated with the given log file.
Parameter(s)	• LogFilePath
Example	This command retrieves the CP results associated with “C:\CP01.txt” • GET RESULTS: C:\CP01
Nomad Response	• Results are displayed in the following format: CP RESULT: CHANNEL X, MessageType, TimestampUTC, CallID, AccessTimeout, AccessTime, ExpectedDuration, ActualDuration, ResultType Once all results have been sent, a message will be sent in the following format indicating the total number of results that were sent: CP RESULTS SENT: numberOfResultsSent
Possible Error Responses	• File does not exist • Not a valid log file • File data not complete • No CP Results available

3.18 COMPLETE DATA

Command Format	• COMPLETE DATA: <i>LogFilePath</i>
Purpose	• Completes all data (Call Performance and/or Voice Quality) associated with the given log file
Parameter(s)	• LogFilePath
Example	This command will complete the Voice Quality data in the logfile “C:/VQ1.txt” • COMPLETE DATA: C:/VQ1.txt This command will complete the Call Performance data in the logfile “C:/CP1.txt” • COMPLETE DATA: C:/CP1.txt
Nomad Response	• The following result will be displayed if the data associated with the given log file is already complete: FILE DATA ALREADY COMPLETE If the data associated with the given log file is not yet complete, then a status message will be displayed indicating ongoing completion action every 10 seconds until a final confirmation message is returned. An example follows: COMPLETING DATA, PLEASE WAIT... COMPLETING DATA, PLEASE WAIT...

FINISHED COMPLETING DATA

- | | |
|---------------------------------|--|
| FINISHED COMPLETING DATA | |
| Possible Error Responses | <ul style="list-style-type: none">• File does not exist• Not a valid log file |

3.19 SET SCORING MODEL

Command Format	• SET SCORING MODEL: <i>ChannelIndex, ScoringModel</i>
Purpose	• Sets the scoring model for the given ChannelIndex and ScoringModel parameters
Parameter(s)	• ChannelIndex • ScoringModel
Example	This command sets the scoring model of channel 1 to PESQ • SET SCORING MODEL: 1, PESQ This command sets the scoring model of channel 2 to POLQA SET SCORING MODEL: 2, POLQA
Nomad Response	• Scoring model set to PESQ • Scoring model set to POLQA
Possible Error Responses	• Invalid Channel • Invalid task descriptor (Channel does not have a valid task descriptor) • Invalid scoring model

3.20 GENERATE EXCEL

Command Format	• GENERATE EXCEL: <i>LogFilePath, ExcelPath</i>
Purpose	• Generates an Excel report from the give LogFilePath and saves it to the give ExcelPath
Parameter(s)	• LogFilePath • ExcelPath
Example	This command will generate the excel report for the given LogFilePath and ExcelPath parameters • GENERATE EXCEL: C:/CP1.txt, C:/CP1.xlsx
Nomad Response	If ExcelPath were set to "C:/CP1.xlsx" • C:/CP1.xlsx created

Possible Error Responses	• Invalid number of arguments • The log file 'LogFilePath' does not exist on disk! • The excel file 'ExcelPath' already exists on disk! Please choose another file. • Unable to create report
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3.21 SET PROMPT

Command Format	• SET PROMPT: PromptString
Purpose	• Sets the prompt string for the terminal
Parameter(s)	• PromptString
Example	This command will set the command prompt to the > symbol • SET PROMPT: >
Nomad Response	If the prompt was set correctly • Prompt set to >
Possible Error Responses	• N/A

3.22 RECONNECT BT

Command Format	• RECONNECT BT
Purpose	• Reconnects all Bluetooth channels
Example	This command will set the command prompt to the > symbol • RECONNECT BT
Nomad Response	• Reconnect BT Initiated OK: Reconnect BT Initiated EVENT: Channel 1 - Service:True EVENT: Channel 1 - Signal:2 EVENT: Channel 1 - Roaming:False EVENT: Channel 1 - Battery:2 EVENT: Channel 1 - RSSI:8 EVENT: Channel 1 - RXQUAL:255 EVENT: Channel 1 - Name:DEVICE-NAME EVENT: Channel 1 - SubscriberNumber:111111111 EVENT: Channel 1 - Bluetooth Address:12:23:34:45:56:67
Possible Error Responses	• N/A

3.23 START PAIRING

Command Format	• START PAIRING: ChannelIndex
Purpose	• Starts the pairing process

Parameter(s)	ChannelIndex
Example	START PAIRING:1
Nomad Response	EVENT: Channel 1 pairing enabled.
Possible Error Responses	ERROR: Channel is not in the READY state. Cannot start pairing.

3.24 STOP PAIRING

Command Format	STOP PAIRING: ChannelIndex
Purpose	Stops the pairing process.
Parameter(s)	ChannelIndex
Example	STOP PAIRING:1
Nomad Response	OK: Channel 1 pairing disabled.
Possible Error Responses	ERROR: Channel is not in the Connecting state. Cannot stop pairing.

3.25 QUIT

Command Format	QUIT
Purpose	Quits the application
Example	quit
Nomad Response	OK: Exiting...
Possible Error Responses	Test is in progress. Cannot quit.